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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/652,090	08/31/2000	Haruo Kodama	9369-51US(T37-124467M/TH)	2837

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AKIN GUMP STRAUSS HAUER & FELD L.L.P.
ONE COMMERCE SQUARE
2005 MARKET STREET, SUITE 2200
PHILADELPHIA, PA 19103-7013

EXAMINER

LOPEZ, FRANK D

ART UNIT	PAPER NUMBER
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3745

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/652,090	Applicant(s) KODAMA ET AL.	
	Examiner F. Daniel Lopez	Art Unit 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 01 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-5 and 37-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 37-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/12/04</u> | 6) <input type="checkbox"/> Other: _____ |

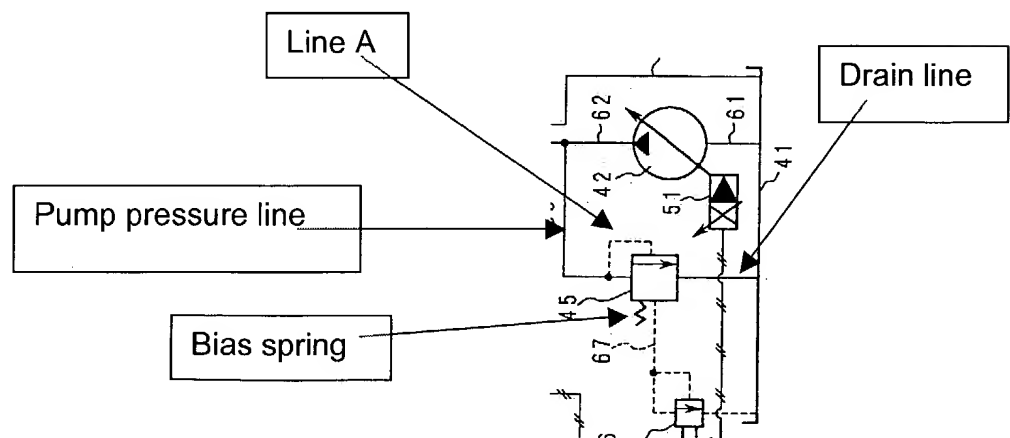
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Response to Amendment

Applicant's arguments filed April 1, 2004, have been fully considered but they are not deemed to be persuasive.

Applicant argues that "one skilled in the art, reading the foregoing would understand that the electromagnetic current applied to the electromagnetic relief valve 46 is controlled by a closed loop feedback system which senses the pressure at the hydraulic pump 42 and the hydraulic motor 43 and then controls the pressure at the hydraulic pump 42 to be greater...than the pressure of...the hydraulic motor", and therefore is enabling. The examiner disagrees.

One of ordinary skill in the field of hydraulic circuits, where the circuit includes a variable displacement pump delivering fluid to a hydraulic motor and controlling the pump to have an output pressure higher than a load pressure of the hydraulic motor, is a sophisticated engineer. One of ordinary skill would understand a variety of factors, including open looped and closed loop feedback systems, and how pressure relief valves work. A closed loop feedback senses an actual output and uses a difference between the actual output and a desired output, to control the elements resulting in the output. An open loop feedback controls the elements resulting in the output, based on a desired output, without sensing the actual output. A pressure relief valve (such as 45, in fig 1, see below) senses an incoming pressure (in the pump pressure line, by Line A), and opens to drain the incoming pressure (through the Drain line), when the sensed



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pressure (in Line A) is greater than the pressure in line 67 plus a pressure corresponding to the Bias spring. This is inherently a closed loop feedback system, with the pump pressure (in the Pump pressure line) being compared to a desired pressure (pressure in line 67 plus pressure corresponding to the Bias spring).

One of ordinary skill, reviewing the instant application, would recognize that the statement "the oil pressure control circuit 23B determines the current to be fed to the electromagnetic relief valve 46 so that the pressure of the working oil received from the hydraulic pump 42 is higher than the pressure of the working oil for driving and rotating the hydraulic motor 43 by 20 kg/cm² at maximum" (e.g. in arguments page3 paragraph 2, citing from page 54 of the specification) can be accomplished by sensing only the working oil pressure. As discussed above the pressure relief valve would cause the pump pressure to be less than or equal to P_S (pressure corresponding to the bias spring) + P_1 (pressure in line 67), which needs to be equal to P_L (Working oil pressure) + 20 kg/cm². Therefore, if P_1 is set equal to $P_L + 20 \text{ kg/cm}^2 - P_S$, the pump pressure would meet this requirement. Although it is clear that applicant wants to use the pump pressure to control the relief valve, there is nothing in the specification as to how to use the pump pressure to control the relief valve. And therefore the specification is inoperative, inadequately described and non-enabling.

Applicant's attorney pointed to a number statements in the specification (e.g. "This process is repeated constantly), which were supposed to indicate how the pump pressure was to be used to control the signal, but do not appear to do so. Each of the statements is applicable to the system without using the pump pressure in generating the signal. For example, if the load pressure is used to generate the signal, the process of sensing the load pressure and generating the signal would be constantly repeated, to adjust for changes in the load pressure.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

Claims 1-5 and 37-39 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention and/or in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 1 line 45-54 claims "oil pressure control means for receiving the supplying-oil pressure signal output...and the drive oil pressure signal...and outputting a pressure signal...thereby controlling the pressure of the working oil supplied from the working oil supplying means to be higher, by a predetermined pressure, than the pressure of the working oil for driving and rotating the drive rotary member". Page 52 line 5-8 states "A pressure of the working oil supplied from the hydraulic pump 42 to the directional control valve 25 is controlled to be higher than the pressure of the working oil for driving and rotating the hydraulic motor 43 by a maximum pressure of 20 kg/cm²"; and page 53 line 11- page 54 line 3 states "When the pressure control circuit 23B varies the current...to the electromagnetic relief valve 46, a set pressure of the electromagnetic relief valve 46 varies since the set pressure...is determined by the current input thereto. Since the pressure of the pilot oil in the pilot oil passage 67 is equal to the set pressure in the electromagnetic relief valve 46, the pressure of the pilot oil also varies with variation of the set pressure of the electromagnetic relief valve 46. The set pressure of the main relief valve 45 is determined by the pressure of the pilot oil...Further, the main relief valve controls the pressure of the working oil that is supplied from the hydraulic pump 42...to be the set pressure or lower."

Clearly, the above claim and discussion indicate that the pressure difference between the pressure supplied by the pump and the pressure of the working oil is a maximum of 20 kg/cm². Since the main relief valve 45 is moved to an open position by the pressure supplied by the pump and moved toward a closed position by pressure in pilot line 67 and by the spring; to achieve this pressure difference, the pressure in the

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pilot line plus a pressure corresponding to the spring must be equal to the working pressure plus the 20 kg/cm². Since the pressure in the pilot line 67 is only a function of the working pressure, the current sent to the electromagnetic relief valve 46 is only a function of the working pressure, and therefore it is unclear why the supply pressure is sent to the control unit 23B, and how the supply pressure is used to generate the current for the electromagnetic relief valve 46.

If the supply pressure is not used to determine the current for the electromagnetic relief valve 46, as appears evident from the above discussion, then the disclosure is confusing, for indicating that the supply pressure is used to determine the current. Otherwise, if the supply pressure is used to determine the current for the electromagnetic relief valve 46, the specification is not enabling to one of ordinary skill in this art, since the relationship between the working and supply pressures and the current is not specified.

Claim Rejections - 35 USC § 101

Claims 1-5 and 37-39 are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility. As discussed above, it is clear how to determine the signal sent to the electromagnetic valve, based on the working pressure. There is no indication as to how to use the pump pressure to determine the signal sent to the electromagnetic valve. Since all of the claims include the limitation "an oil pressure control unit for receiving the supply-oil pressure signal output...and the drive oil pressure signal output...and outputting a pressure signal", since the oil pressure control unit only generates the pressure signal output, since one of ordinary skill in this art would not know, and the disclosure does not indicate, how to use the supply-oil pressure signal output to generate the pressure signal, this disclosure is inoperative.

Conclusion

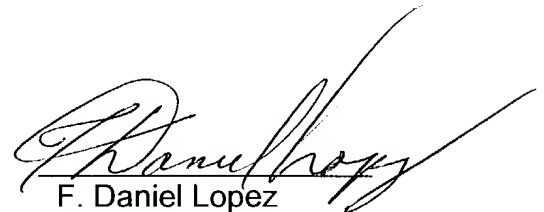
THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Lopez whose telephone number is (703) 308-0008. The examiner can normally be reached on Monday-Thursday from 6:30 AM -4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Look, can be reached on (703) 308-1044. The fax number for this group is (703) 308-7763. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0861.



F. Daniel Lopez
Primary Examiner
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July 25, 2004